

Notice of Allowability

Application No.

10/809,669

Examiner

George P. Wyszomierski

Applicant(s)

TROITSKI ET AL.

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the papers received 4/23/2007.
2. ☒ The allowed claim(s) is/are 15-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

1. An examiner's amendment to the record appears on page 3 of this Action.

Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Igor Troitski and Victor Samarov on May 15, 2007.

2. The following is an examiner's statement of reasons for allowance:

a) The supplemental Declaration received April 23, 2007 appears to be in compliance with 37 CFR 1.67(a).

b) The prior art does not disclose or suggest a method in accord with new claim 18, i.e. providing a shaping tool and hollow inserts, assembling same and filling a capsule portion with powder, then performing a two-step HIP process, the first such step at a lower temperature with cavities of the inserts isolated from the HIP atmosphere, then connecting the cavities to the HIP atmosphere and performing a second HIP step at a final temperature.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The claims have been amended to read as follows: Claims 1-14 (Canceled)

Claim 15 (Currently amended). A method in accordance with ~~the~~ Claim 18 ~~40~~, wherein ~~the~~ said connection of the cavity of ~~in~~ the ~~hollow~~ inserts to the HIP atmosphere is performed by cooling the capsule and opening ~~the~~ said vent tube.

Claim 16 (Currently amended). A method in accordance with ~~the~~ Claim 18 ~~40~~, wherein ~~the~~ said connection of the cavity of ~~in~~ the ~~hollow~~ inserts to the HIP atmosphere is performed ~~done~~ by perforating ~~of~~ a membrane installed inside ~~the~~ said vent tube at a ~~by the HIP~~ pressure below the final HIP pressure ~~for the powder material~~.

Claim 17 (Currently amended). A method in accordance with ~~the~~ Claim 18 ~~40~~, wherein ~~the~~ said connection of the cavity of ~~in~~ the ~~hollow~~ inserts to the HIP atmosphere is performed ~~done~~ by melting a plug installed inside ~~the~~ said vent tube at a temperature below the final HIP temperature ~~for the powder material~~.

Claim 18 (New). A method for manufacturing complex shape parts with cavities from powder metal materials by Hot Isostatic Pressing (HIP), the method comprising:


- a) providing a shaping tool including a capsule having internal shape and dimensions corresponding to desired shape and dimensions of a complex shape part;
- b) providing hollow inserts having cavities corresponding to desired shape and dimensions of said cavities of said complex shape parts, and including a vent tube capable of controlling pressure inside said inserts;
- c) assembling the capsule and the inserts and filling the capsule with powder;
- d) performing an HIP step on the powder at a temperature below a final HIP temperature for the powder material while the cavities of the inserts are isolated from the HIP atmosphere and so that the pressure on the outer surface of the inserts exceeds the HIP pressure;
- e) connecting the cavity of the inserts to the HIP atmosphere through the vent tube;
- f) performing an HIP step on the powder at a final HIP temperature and pressure by injecting HIP gas media through the vent tube and into the cavity of the inserts;
- g) removing the capsule and the inserts.

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300. This Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1742

GPW
May 15, 2007